

AMENDMENTS TO THE DRAWINGS

The drawings are objected to under 37 C.F.R. § 1.83(a) as allegedly not showing every feature of the claimed invention. FIG. 2(a) is amended, a replacement sheet is provided, as is a mark-up version showing changes in red ink.

REMARKS

Applicant acknowledges with appreciation the allowance of claims 1, 4-7, 9, 10, 13-20, 26-34, and 37 and the indication of allowability of claims 40-42.

Claims 8, 38, 39, and 46 are amended. Claims 2, 3, 11, 12, 21-25, 35, 36, 40, 47, and 50-93 are cancelled, without prejudice to their underlying subject matter. Claims 23 and 44 have been withdrawn from consideration by the Examiner as allegedly directed to a non-elected species, but should be reinstated upon the allowance of any claim upon which these claims depend. Formerly withdrawn claims 30 and 33 have been reinstated by the Examiner. Claims 1-20, 26-34, 37-39, 41-46, 48, and 49 are pending. The specification is amended to correct the discussion of FIG. 2(a) and 2(b). FIG. 2(a) is amended to better show subject matter disclosed in the specification; a replacement sheet is attached at Appendix A. No new matter is added by the amendment to the specification or drawings.

The drawings stand objected to under 37 C.F.R. § 1.83(a) as allegedly not showing every feature of the invention claimed. FIG. 2(a) is amended to show how a transfer transistor can have a greater gate length relative to the other transistors of the same pixel. This subject matter is supported by the application as originally filed, at least at paragraphs 0028, 0033, 0040, and 0044, of the specification. The specification is amended to discuss reference numbers relating to gate length (i.e., 44 and 44'), which have been added to FIG. 2(a). The objection to the drawings is respectfully requested to be withdrawn.

Claims 8 and 39 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant respectfully traverses this rejection. Claims 8 and 39 are

amended to clarify the recited subject matter. The rejection is respectfully requested to be withdrawn.

Claims 21 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,166,405 ("Kuriyama et al.") in view of U.S. Patent 5,780,902 ("Komuro"). Applicant respectfully traverses this rejection, but these claims are nevertheless cancelled herein to simplify prosecution.

Claims 22 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuriyama et al. in view of Komuro and also in view of U.S. Patent 5,793,088 (Choi et al.). Applicant respectfully traverses this rejection, but these claims are nevertheless cancelled herein to simplify prosecution.

Claims 38, 43, and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuriyama et al., Komuro, and Choi et al. Applicant respectfully traverses this rejection.

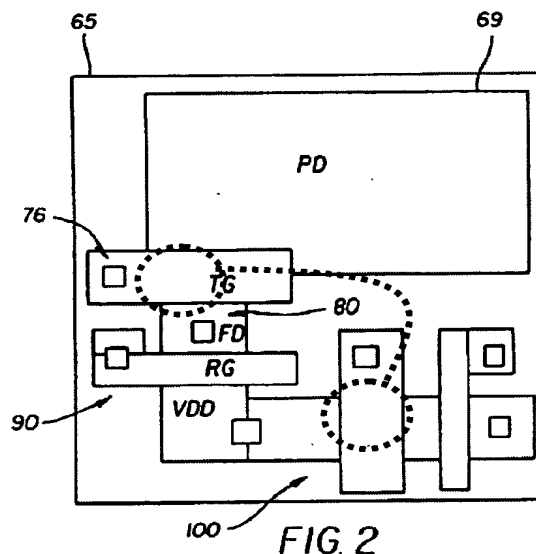
Claim 38 is amended so as to incorporate the subject matter of claim 40, which the Office Action (page 9) indicated was allowable. For at least this reason, the rejection of claims 38, 43, and 45 is respectfully requested to be withdrawn.

Claims 46 and 49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,730,988 (Stevens et al.) in view of Kuriyama et al. and Komuro. Applicant respectfully traverses this rejection.

Claim 46, as amended, defines a pixel cell and recites "a transistor in electrical contact with a photodiode, said transistor comprising a single active area extension region and halo implant region on a opposite side of said transistor from said photodiode, said transistor also having a gate length which is greater than that of any

other transistor of a same pixel.” This is not taught or suggested by Stevens et al., Kuriyama et al., and Komuro.

As was indicated in the Office Action (page 9) in relation to claim 40 (deemed allowable), independent claim 46 recites “said transistor also having a gate length which is greater than that of any other transistor of a same pixel.” Such subject matter is not taught or suggested in the combination of references. Stevens et al. is relied upon in the Office Action (page 7) for such a disclosure; however, this is a misinterpretation of Stevens et al. As shown in FIG. 2 of Stevens et al. (reproduced below), the transistor in electrical contact with the photodiode (having gate 76) does not have a greater gate length than the other transistor gates of the pixel.



As highlighted (see dotted lines) in the reproduced figure above, at least one other transistor gate of the pixel of Stevens et al. has the same gate length as the gate for the transistor at the photodiode. Further, Stevens et al. does not indicate that the illustration of transistor gates in FIG. 2 are actually representative of the pixel's structure. For at least this reason, the combination of Stevens et al., Kuriyama et al. and Komuro would not have made the recited subject matter obvious. Applicant

respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 46 and 49 be withdrawn.

Claim 48 stands rejected under 35 U.S.C. § 103(a) over Kuriyama et al., Komuro, and Choi et al. Applicant respectfully traverses this rejection. Since claim 48 depends from independent claim 46, which has been shown to be patentable over Kuriyama et al., Komuro, and Stevens et al., and since Choi et al. fails to teach or suggest subject matter relating to gate length as recited by independent claim 46, claim 48 is patentable over this combination of references. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claim 38 be withdrawn.

Applicant believes all pending claims are in immediate condition for allowance and respectfully requests a Notice of Allowance for all pending claims.

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Respectfully submitted,

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Attachment: Appendix A (amended drawings)

APPENDIX A

Amended FIG. 2(a)

Markup and replacement sheets attached

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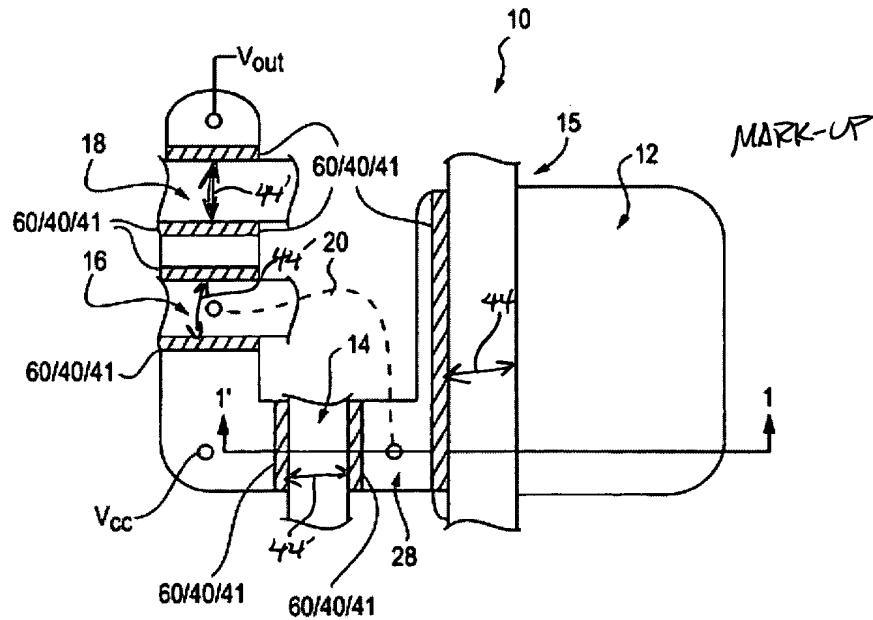


FIG. 2(a)

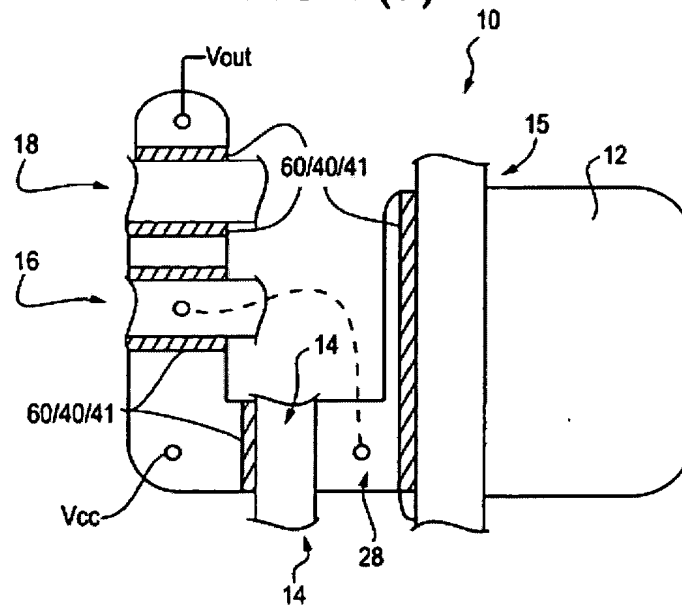


FIG. 2(b)